Claim Amendments Illustrated – U.S. Patent Application Serial No. 09/874,606

1. (*Amended*) A semiconductor chip having circuitry, the semiconductor chip comprising:

a metal bond pad over the circuitry and insulated on at least two sides by passivation material;

a diffusion barrier layer over the metal bond pad, at least two entire sides of the diffusion layer being insulated by the passivation material; and

a metal layer over the circuitry, the metal bond pad, the diffusion barrier layer, and at least partially over, and in contact with, a portion of the passivation material not over the diffusion barrier layer, the metal layer being configured and arranged for connecting to a wire bond, wherein the diffusion barrier layer is constructed and arranged to mitigate inter-metallic compounds forming as a reaction to the metal layer connecting to the wire bond.

11. (*Amended*) A semiconductor chip having circuitry, the semiconductor chip comprising:

an aluminum bond pad over the circuitry and insulated on at least two sides by passivation material;

a diffusion barrier layer, including TiN, over the aluminum bond pad, at least two entire sides of the diffusion layer being insulated by the passivation material; and

a metal layer over the circuitry, the metal bond pad, the diffusion barrier layer, and at least partially over, and in contact with, a portion of the passivation material not over the diffusion barrier layer, the metal layer being configured and arranged for connecting to a wire bond and the diffusion barrier layer being constructed and arranged to mitigate inter-metallic aluminum-based compounds forming as a reaction to the metal layer connecting to the wire bond.

12. (*Amended*) The semiconductor chip of claim [8]11, wherein the diffusion barrier layer has a thickness that is at least 0.5 micron, the metal layer has a thickness that is at least 3 microns.

14. (*Amended*) A semiconductor chip having circuitry, the semiconductor chip comprising:

an aluminum bond pad over the circuitry and insulated on at least two sides by means for electrically insulating the aluminum bond pad;

barrier means, including TiN, over the aluminum bond pad, at least two entire sides of the diffusion layer being insulated by the passivation material; and

a metal layer over the circuitry, the metal bond pad, the barrier means, and at least partially over, and in contact with, a portion of the means for electrically insulating the aluminum bond pad not over the barrier means, the metal layer being configured and arranged for connecting to a wire bond and the barrier means for mitigating inter-metallic aluminum-based compounds forming as a reaction to the metal layer connecting to the wire bond.